AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently Amended) A video signal processing method comprising:

extracting a first predetermined frequency component in a three-dimensional frequency space from a luminance signal of a component video signal; and

eliminating a second predetermined frequency component from the luminance signal according to the first predetermined frequency component value,

~~The video signal processing method of Claim 1,~~

wherein the first predetermined frequency component is extracted by filtering the luminance signal in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the luminance signal in a temporal direction with a filter having a pass-band of 15Hz.

3. (Canceled)

4. (Currently Amended) A video signal processing method comprising:

extracting a first predetermined frequency component in a three-dimensional frequency space from a luminance signal of a component video signal; and

eliminating a second predetermined frequency component from the luminance signal according to the first predetermined frequency component value,

~~The video signal processing method of Claim 1,~~

wherein the second predetermined frequency component is obtained by filtering the luminance signal in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the luminance signal in a temporal direction with a filter having a pass-band of 15Hz.

5. (Previously Presented) A video signal processing apparatus comprising:

a horizontal filter operable to receive luminance signal components of a component video signal, and operable to filter the luminance signal components of the component video signal in a horizontal direction;

a time filter operable to filter an output of the horizontal filter in a temporal direction;

a comparator operable to decide whether an output of the time filter is equal to or larger than a predetermined threshold;

a gain adjuster operable to receive the output of the horizontal filter, operable to change a gain of the output of the horizontal filter according to a result of the comparator, and operable to output an obtained result; and

a subtracter operable to subtract an output of the gain adjuster from the luminance signal components.

6. (Previously Presented) A video signal processing apparatus comprising:

a filter operable to receive luminance signal components of a component video signal, and operable to filter the luminance signal components of the component video signal in a horizontal direction and in a temporal direction;

a comparator operable to decide whether an output of the filter is equal to or larger than a predetermined threshold;

a gain adjuster operable to receive the output of the filter, operable to change a gain of the output of the filter according to a result of the comparator, and operable to output an obtained result; and

a subtracter operable to subtract an output of the gain adjuster from the luminance signal components.

7. (Previously Presented) The video signal processing apparatus of Claim 5, wherein

the horizontal filter is a band-pass filter having a pass-band of 3.58MHz, and the time filter is a high-pass filter having a pass-band of 15Hz.

8. (Previously Presented) The video signal processing apparatus of Claim 6, wherein

the filter is a filter having a horizontal pass-band of 3.58MHz and a temporal pass-band of 15Hz.

9. (Previously Presented) A video signal processing method comprising:

extracting a first frequency component from luminance signal components of a component video signal;

obtaining a difference value of the luminance signal components between a present frame and an immediately preceding frame;

obtaining a difference value of color-difference signal components of the component video signal between the present frame and the immediately preceding frame; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the present frame and the immediately preceding frame, when the first frequency component value of the luminance signal components is equal to or larger than a first predetermined value, the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a second predetermined value, and an absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a third predetermined value.

10. (Previously Presented) A video signal processing method comprising:

extracting a first frequency component from luminance signal components of a component video signal;

obtaining a difference value of the luminance signal components between a present frame and an immediately preceding frame;

obtaining a difference value of color-difference signal components of the component video signal between the present frame and the immediately preceding frame;

obtaining a difference value of the color-difference signal components between the present frame and a frame that is two frames before; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the

present frame and the immediately preceding frame, when the first frequency component value of the luminance signal components is equal to or larger than a first predetermined value, an absolute value of the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a second predetermined value, an absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a third predetermined value, and an absolute value of the difference value of the color-difference signal components between the present frame and a frame that is two frames before is equal to or smaller than a fourth predetermined value.

11. (Previously Presented) The video signal processing method of Claim 9, wherein

the first frequency component is extracted by filtering the luminance signal components with a horizontal band-pass filter having a pass band of 3.58MHz.

12. (Previously Presented) A video signal processing apparatus comprising:

a filter operable to receive luminance signal components of a component video signal, and operable to extract a first predetermined frequency component;

a first frame memory operable to store the luminance signal components for one frame period;

a first subtracter operable to obtain a difference value between the luminance signal components and an output of the first frame memory;

a second frame memory operable to store color-difference signal components of the component video signal for one frame period;

a second subtracter operable to obtain a difference value between the color-difference signal components and an output of the second frame memory;

a noise detector operable to receive an output of the filter, an output of the first subtracter and an output of the second subtracter, and operable to detect noises;

a gain adjuster operable to receive the output of the second subtracter, and operable to change a gain of the output of the second subtracter according to a result of the detection by the noise detector; and

a third subtracter operable to subtract an output of the gain adjuster from the color-difference signal components.

13. (Previously Presented) The video signal processing apparatus of Claim 12, wherein

the filter is a horizontal band-pass filter having a pass-band of 3.58MHz, and

the noise detector decides that noises are detected, when an absolute value of the output of the filter is equal to or larger than a first predetermined value, an absolute value of the output of the first subtracter is equal to or smaller than a second predetermined value, and an absolute value of the output of the second subtracter is equal to or larger than a third predetermined value.

14. (Previously Presented) The video signal processing apparatus of Claim 12, wherein

the gain adjuster changes the gain of the output of the second subtracter to one-half when noises are detected by the noise detector, and changes the gain to 0 when no noise is detected by the noise detector.

15. (Previously Presented) A video signal processing method by which dot crawls and time-axis noises are eliminated from luminance signal components of a component video signal, the method comprising:

extracting a first predetermined frequency component from the luminance signal components in a three-dimensional frequency space;

eliminating a second predetermined frequency component from the luminance signal components according to a size of the first predetermined frequency component when elimination of the dot crawls is designated; and

eliminating minute-level components varying in a temporal direction when elimination of the time-axis noises is designated.

16. (Previously Presented) The video signal processing method of Claim 15, wherein

the first predetermined frequency component is extracted by filtering the luminance signal components in a horizontal direction with a filter having a pass-band of 3.58MHz, and further filtering the luminance signal components in a temporal direction with a filter having a pass-band of 15Hz.

17. (Previously Presented) A video signal processing method by which cross color interferences and time-axis noises are eliminated from color-difference signal components of a component video signal, the method comprising:

eliminating minute-level components varying in a temporal direction of the color-difference signal components when elimination of the time-axis noises is designated;

obtaining a difference value of the color-difference signal components between a present frame and an immediately preceding frame when elimination of the cross color interferences is designated;

extracting a predetermined frequency component of luminance signal components of the component video signal;

obtaining a difference value of the luminance signal components between the present frame and the immediately preceding frame;

deciding that the cross color interferences are occurring when an absolute value of the difference value of the color-difference signal components between the present frame and the immediately preceding frame is equal to or larger than a first predetermined value, an absolute value of the predetermined frequency component of the luminance signal components is equal to or larger than a second predetermined value, and an absolute value of the difference value of the luminance signal components between the present frame and the immediately preceding frame is equal to or smaller than a third predetermined value; and

subtracting one-half of the difference value of the color-difference signal components between the present frame and the immediately preceding frame from the color-difference signal components, or replacing the color-difference signal components with an average value of the present frame and the immediately preceding frame, when it is decided that the cross color interferences are occurring.

18. (Previously Presented) The video signal processing method of Claim 17, wherein

the predetermined frequency component of the luminance signal components is extracted by filtering the luminance signal components with a horizontal band-pass filter having a pass-band of 3.58MHz.

19. (Previously Presented) A video signal processing apparatus comprising:

a first subtracter operable to subtract a first output of a noise detector from luminance signal components of a component video signal;

a first frame memory operable to store an output of the first subtracter for one frame period;

a second subtracter operable to subtract an output of the first frame memory from the luminance signal components;

a first filter operable to extract a predetermined frequency component from the output of the first subtracter;

a second filter operable to extract a predetermined frequency component from an output of the second subtracter;

a third subtracter operable to subtract a second output of the noise detector from color-difference signal components of the component video signal;

a second frame memory operable to store an output of the third subtracter for one frame period;

a fourth subtracter operable to subtract an output of the second frame memory from the color-difference signal components;

a designation input mechanism operable to input designation regarding which noises among dot crawls, cross color interferences and time-axis noises are to be eliminated, from outside;

wherein the noise detector is operable to receive the respective outputs of the first filter, the second filter, the second subtracter and the fourth subtracter, and the designation inputted by the designation input mechanism as to which noises among dot crawls, cross color interferences and time-axis noises are to be eliminated, operable to decide a third output on the basis of the respective outputs of the second filter and the first filter when elimination of the dot crawls is designated, operable to decide a second output on the basis of the respective outputs of the first filter, the second subtracter and the fourth subtracter when elimination of the cross color interferences is designated, and operable to decide a first output on the basis of the output of the second subtracter and a second output on the basis of the output of the fourth subtracter when elimination of the time-axis noises is designated; and

wherein a fifth subtracter is operable to subtract the third output of the noise detector from the output of the first subtracter.

20. (Previously Presented) The video signal processing method of Claim 10, wherein

the first frequency component is extracted by filtering the luminance signal components with a horizontal band-pass filter having a pass band of 3.58MHz.